

AMENDMENTS TO THE CLAIMS

Please add or amend the claims to read as follows, and cancel without prejudice or disclaimer to resubmission in a divisional or continuation application claims indicated as cancelled:

1. (Amended) Apparatus for decreasing pressure in a first portion ~~chamber of a vessel of the cardiac structure of a heart,~~ the apparatus comprising[:] a shunt ~~communicating with an area outside said first portion, whereby a volume of blood sufficient to reduce pressure in said first portion is released,~~ said shunt including a fixation element, shunt tube element, and valve element, said valve element adapted to enable selectively permitting blood flow between the first chamber and a second chamber of a heart at a selected pressure threshold.
2. (Amended) The apparatus of claim 1, wherein ~~the first portion comprises the left ventricle, wherein said shunt communicates with the left ventricle, whereby~~ to enable a small volume of blood [is] to be released from the left ventricle to ~~reduce~~ maintain the end diastolic pressure in the left ventricle at 15 mmHg or less.
3. (Cancelled)
4. (Amended) The apparatus of claim [2]1, wherein ~~the shunt comprises~~ said valve is a passive check-valve that is adapted to allow[s] flow when a pressure differential between the ~~left ventricle~~ the first chamber and said second chamber of a heart is between a lower threshold and a higher threshold, whereby shunting is prevented during left ventricular systole.
5. (Amended) The apparatus of claim [2]1, wherein ~~the shunt comprises~~ said valve is a semi-passive check-valve that is adapted to be comprising a valve activated by an external signal.
6. (Amended) The apparatus of claim 5, wherein comprising an intra-corporeal electrical battery adapted to generate[s] said external signal.

APPLICANT(S): KESTEN, Randy et al.
SERIAL NO.: 09/839,643
FILED: April 20, 2001
Page 7

7. (Amended) The apparatus of claim 5, wherein comprising signal is generated by an externally coupled energy source adapted to generate said external signal.
8. (Amended) The apparatus of claim [2]1, further-comprising a pump, said pump adapted to be in fluid communication with the shunt and having an input connected to the left ventricle first chamber and an output connected to a volume of blood at a lower pressure.
9. (Amended) The apparatus of claim [2]1, comprising a wherein said tubular element having includes two ends and a tissue [af]fixation element disposed at each of said ends.
10. (Amended) The apparatus of claim [8]1, wherein said tubular element is comprised of a biologically inert non-metallic material.
11. (Amended) A method of decreasing pressure in a first portion chamber of a vessel of the a heart cardiac structure of a patient, the method comprising the step of implanting a shunt adapted to communicating with an area a second chamber outside said the first portion chamber, whereby a volume of blood sufficient to reduce pressure in said the first portion chamber, when said pressure reaches a selected threshold, is released from the first chamber to said second chamber.
12. (Amended) The method of claim 11, comprising wherein the first portion comprises the left ventricle and said pressure is the end diastolic pressure in a patient heart, wherein said shunt communicates with the left ventricle, whereby a small volume of blood is released releasing blood from the left ventricle the first chamber to said second chamber to reduce maintain the end diastolic pressure in the first chamber at 15 mmHg or less.
13. (Amended) The method of claim 12, further comprising the step of selectively permitting flow when a selected pressure differential exists between the left ventricle first chamber and said second another chamber of a said heart above a threshold pressure, whereby shunting is prevented during left ventricular systole.

APPLICANT(S): KESTEN, Randy et al.
SERIAL NO.: 09/839,643
FILED: April 20, 2001
Page 8

14. (Amended) The method of claim 12, further comprising ~~the step of~~ selectively permitting flow when a pressure differential between the ~~left ventricle~~ first chamber and ~~another~~said second chamber of [a] said heart is between a lower threshold and a higher threshold; ~~whereby shunting is prevented during left ventricular systole.~~
15. (Amended) The method of claim 12, ~~further comprising the step of~~ actuating a semi-passive check-valve by an external signal.
16. (Amended) The method of claim 15, ~~further comprising the step of~~ generating said signal with using an intra-corporeal electrical battery.
17. (Amended) The method of claim 15, ~~further comprising the step of~~ generating said signal with using an externally coupled energy source.
18. (Amended) The method of claim 12, ~~further comprising the step of~~ activating a pump in fluid communication with the shunt, said pump and having an input connected to the left ventricle first chamber and an output connected to a volume of lower pressure blood.
19. (Amended) The method of claim 12, further comprising ~~the step of~~ implanting said shunt using a catheter, said implanting ~~step comprising the step of~~ including deploying a tubular element having two ends and a tissue [a]fixation element disposed at each of said ends ~~via a catheter.~~
20. (Amended) The method of claim 19, ~~wherein said tissue fixation element is a shape retaining metallic material and~~ further comprising ~~the step of~~ releasing the at least one said tissue fixation element[s].
21. (New) The method of claim 19, wherein said tissue fixation element is a shape retaining metallic material.

APPLICANT(S): KESTEN, Randy et al.
SERIAL NO.: 09/839,643
FILED: April 20, 2001
Page 9

22. (New) The apparatus of claim 1, wherein said shunt tube further comprises a flat pivoting plate.
23. (New) The apparatus of claim 8, wherein said pump is capable of moving blood from a chamber exhibiting at least 20 mmHg in diastole to at least 70 mmHg or more in the aorta.
24. (New) The apparatus of claim 8, wherein said pump is capable of moving blood from the left ventricle to the right atrium during diastole and systole.
25. (New) The apparatus of claim 8, wherein said shunt is to prevent blood flow from the left ventricle during left ventricular systole.
26. (New) The apparatus of claim 1, wherein the first portion comprises the left ventricle, wherein said shunt communicates with the left ventricle, whereby a volume of blood is released from the left ventricle to reduce the left ventricle pressure by 5 mmHg.
27. (New) The apparatus of claim 1, wherein the first portion comprises the left atrium, wherein said shunt communicates with the left atrium, whereby a volume of blood is released from the left atrium to reduce the left atrium pressure by 5 mmHg.
28. (New) The method of claim 11, wherein said volume of blood is sufficient to reduce the left ventricle pressure by 5 mmHg.
29. (New) The method of claim 11, wherein said volume of blood is sufficient to reduce the left atrium pressure by 5 mmHg.
30. (New) The method of claim 11, wherein if left ventricle end diastolic pressure exceeds 25 mmHg and/or mean left ventricle pressure exceeds 20 mmHg, removing sufficient blood from said left ventricle to reduce left ventricle pressure by 5 mmHg.

APPLICANT(S): KESTEN, Randy et al.
SERIAL NO.: 09/839,643
FILED: April 20, 2001
Page 10

31. (New) The method of claim 11, wherein if left atrium end distolic pressure exceeds 25 mmHg and/or mean left atrium pressure exceeds 20 mmHg, removing sufficient blood from said left atrium to reduce left atrium pressure by 5 mmHg.